

CLAIMS

1. A method of isolating one or more target compounds from other component(s) of a liquid by at least two chromatographic steps, which method comprises contacting the liquid, in any sequence of order, with an affinity chromatography matrix and/or an ion-exchange chromatography matrix and/or a hydrophobic interaction chromatography matrix to provide interactions between the target compound and the matrices, wherein the contacting with at least one of the matrices takes place in the presence of at least one non-ionic polyether; and obtaining the target compound(s) in a separate fraction from the last chromatographic step.
2. A method according to claim 1, wherein the target compound(s) are adsorbed to one or more of the chromatography matrices.
3. A method according to claim 2, wherein the adsorbed target compound(s) are released by contacting the chromatography matrix with an eluent.
4. A method according to any one of the preceding claims, which comprises two or more consecutive ion-exchange chromatography steps.
5. A method according to any one of claims 1-3, which comprises an affinity step followed by an ion-exchange chromatography step.
6. A method according to any one of claims 1-3, which comprises an ion-exchange chromatography step followed by a hydrophobic interaction chromatography step.
7. A method according to any one of the preceding steps, which comprises three chromatographic steps.
8. A method according to any one of the preceding steps, wherein the first chromatography step is performed in the presence of a non-ionic polyether.
9. A method according to any one of the preceding steps, wherein at least two steps are performed in the presence of a non-ionic polyether.
10. A method according to any one of the preceding claims, wherein the non-ionic polyether is poly(ethylene glycol) (PEG).
11. A method according to any one of the preceding claims, wherein the target compound is an antibody or an antibody compound.
12. A method according to any one of the preceding claims, which comprises an affinity step using a matrix comprised of protein ligands immobilised to porous carriers.

13. A method according to claim 12, wherein the protein ligands comprises one or more of the immunoglobulin-binding domains of Protein A.
14. A method according to claim 12 or 13, wherein the carriers are comprised of cross-linked polysaccharide particles.
- 5 15. A method according to any one of the preceding claims, which comprises an ion-exchange step using a matrix comprised of ligands comprising charged groups, which ligands have been immobilised to a carrier via extenders.
16. A method according to claim 15, wherein the extenders are provided by coating the carrier surfaces with dextran.
- 10 17. A method according to claim 15 or 16, wherein the carriers are comprised of porous cross-linked polysaccharide particles.
18. A kit comprising at least two chromatography columns, each packed with a matrix selected from the group that consists of an affinity chromatography matrix, an ion-exchange chromatography matrix and a hydrophobic interaction chromatography matrix;
15 a buffer comprising a non-ionic polyether for addition to the mobile phase; and written instructions for its use for antibody purification.
19. A kit according to claim 18, wherein the non-ionic polyether is poly(ethylene glycol) (PEG).
20. A method of isolating an antibody compound from other component(s) of a liquid,
20 which method comprises at least one chromatographic step, wherein in one step, the liquid is contacted with an ion-exchange chromatography matrix to adsorb the antibody compound in the presence of a buffer comprising a non-ionic polyether and at a conductivity which is equivalent to at least 200 mM NaAc.
21. A method according to claim 20, wherein the non-ionic polyether is poly(ethylene glycol) (PEG).
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22. A method according to claim 20 or 21, wherein the ion-exchange chromatography matrix comprises charged ligands, which have been immobilised to one or more porous carriers via extenders.
23. A method according to claim 22, wherein the extenders are provided by coating the
30 carrier surfaces with dextran.

24. A method according to any one of claims 20-23, wherein the carriers are comprised of cross-linked polysaccharide particles.

25. A method of isolating an antibody or an antibody compound from other component(s) of a liquid, which method comprises at least one chromatographic step, wherein in one step, the liquid is contacted with an ion-exchange chromatography matrix to adsorb the antibody compound in the presence of a buffer comprising a non-ionic polyether, wherein the ligands of the ion-exchange chromatography matrix have been immobilised to one or more porous carriers via dextran extenders.

26. A method according to claim 25, wherein the non-ionic polyether is poly(ethylene glycol) (PEG).

27. A method according to claim 25 or 26, wherein the carriers comprises of cross-linked polysaccharide particles.

28. A kit for isolation of antibodies, which kit comprises, in separate compartments, an ion-exchange chromatography matrix wherein the ligands have been immobilised to porous carriers via dextran extenders, a buffer comprising poly(ethylene glycol) (PEG); and written instructions for adsorption of antibodies to the matrix.